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The Commonwealth of Massachusetts
Massachusetts Senate

**MASSACHUSETTS' FINANCIAL COMMITMENT
TO PUBLIC EDUCATION IN THE EIGHTIES:
A Multi-State Comparative Study**



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Commonwealth of Massachusetts

MASSACHUSETTS SENATE

The Honorable William M. Bulger
President of the Senate

**MASSACHUSETTS' FINANCIAL COMMITMENT
TO PUBLIC EDUCATION IN THE EIGHTIES:
A Multi-State Comparative Study**

A Report of the
SENATE COMMITTEE ON POST AUDIT AND OVERSIGHT

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EXECUTIVE SUMMARY

During the 1980's, Massachusetts made financial decisions that threatened the state's leadership as a supporter of public education. Although the Commonwealth made a public commitment to increase resources for improving the quality of education, growth in financial support for primary and secondary public school education did not reflect the decade's prosperity.

To assess educational expenditures, the Senate Committee on Post Audit and Oversight looked at three indicators of state spending: expenditures per pupil, expenditures per capita, and expenditures per one thousand dollars of personal income. In each of these three measures, Massachusetts lost ground to nine comparison states and in only one measure maintained its position relative to the national average.

Of the ten states analyzed, Massachusetts demonstrated one of the smallest rates of increase in educational expenditures per pupil between the 1980/81 and 1989/90 school years -- even with Massachusetts' major educational reform initiatives in 1985 and 1987. The rate of increase in Massachusetts was just below the national average, even though Massachusetts experienced dramatic growth in per capita income during this period. As a result, between 1980/81 and 1986/87, Massachusetts dropped from sixth among the comparison states in per capita spending on education to second-to-last. Furthermore, Massachusetts was the only one of the comparison states that between 1980/81 and 1986/87 dropped below the national average in educational expenditures per every one thousand dollars of personal income.

During the first half of the decade, there was a marked decline in student enrollment. In effect, having to pay for the education of fewer students

lessened the financial burden of education on the state. Demographic shifts, however, indicate that enrollments will start to grow in the younger grades in the next few years. With a growing number of students to educate, Massachusetts will no longer be able to rely on declining enrollments to protect public education from the consequences of limited available funding.

The potential impact for Massachusetts of educational funding decisions is enormous. For the state to maintain its economic leadership nation-wide, there must be a full and expanded financial commitment to the public education system.

FINDINGS

An analysis of spending on education in Massachusetts and in nine comparison states reveals that Massachusetts has spent relatively less on education than these states since the 1980/81 school year. Specific findings of the research conducted by the Senate Post Audit and Oversight Bureau indicate that:

- Per pupil expenditures in Massachusetts on public primary and secondary education grew 19 percent between the 1980/81 and 1989/90 school years, while the national average for per pupil expenditures increased 20 percent. The average increase for the comparison states was 33 percent.
 - Massachusetts spent \$4,394 per pupil (in 1988 dollars) on public primary and secondary education in 1980/81. In the 1989/90 school year, Commonwealth per pupil expenditures increased to \$5,240.
- Massachusetts was the only state analyzed in which per capita spending on public education declined between 1980/81 and 1986/87.
 - Massachusetts per capita spending on education dropped from \$669.80 (in 1988 dollars) in 1980/81 to \$660.13 per capita in 1986/87. The national average during this period went from \$611.97 to \$674.50.
- In 1980/81, education represented 21 percent of state spending in Massachusetts. By 1986/87, public primary and secondary educational expenditures were only 18 percent of the state's budget.
- Educational expenditures per every one thousand dollars of personal income in Massachusetts dropped dramatically (25 percent) between 1980/81 and 1986/87. During the same period, the national average for this indicator dropped only 5 percent, and comparison states declined between 1 and 15 percent.
 - In 1980/81, \$47.85 of every \$1,000 of personal income in Massachusetts went to public primary and secondary education. By 1986/87, this figure dropped to \$35.98.
- The impact of decreased spending on education was softened by declining student enrollments between 1980/81 and 1986/87. The state may no longer be able to take advantage of declining enrollments; the Massachusetts Department of Education estimates that by 1992/93 the state will have 3 percent more students to educate than it had in 1987/88.

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INTRODUCTION

This report by the Senate Committee on Post Audit and Oversight analyzes public expenditures on primary and secondary education in Massachusetts from school years 1980/81 to 1986/87. The Committee compared expenditures in Massachusetts to the national average and to expenditures in nine other states.

The Committee based its assessment on data compiled nationally by the United States Bureau of the Census, the Council of State Governments (C.S.G.) and the National Education Association (N.E.A.). Using these data ensured comparability from year to year and comparability from state to state.

Throughout the study the Committee compared Massachusetts to the national average and to nine other states: California, Connecticut, Indiana, Maryland, Minnesota, New Jersey, New York, Pennsylvania and Wisconsin. We chose Wisconsin and Indiana because they have similar total populations and school populations to Massachusetts. We selected the other seven states for comparison because the Massachusetts Taxpayers Foundation and the Massachusetts High Technology Council have previously used these states for comparative studies and they can be considered "competitor states."

We use three primary indicators to measure state spending on education: state expenditures per pupil, state expenditures per capita, and state spending on education as a percent of personal income. Each of these computations measures something slightly different, and together they give us a more complete picture of the state's expenditures on education than any one indicator alone.

The Committee was particularly interested in analyzing the state's spending on education in light of recent educational initiatives. In 1985, for example, the state passed the Public School Improvement Act (Chapter 188 of the Acts of 1985). This act provided additional state resources to schools in low-income communities in order to equalize educational spending across the state. In 1987 the state passed another major reform initiative, Chapter 727 of the Acts of 1987, which initiated special programs to improve teacher quality, increase citizen involvement, and expand educational opportunities for low-income and low-achieving students.

The success of any of these new programs, however, will be contingent upon the resources available for their implementation. The Committee hoped that an analysis of the Commonwealth's spending on education would provide some insight into the state's ability to support the types of educational initiatives brought forward in recent years.

The Committee also recognized that between 1980/81 and 1986/87, public school enrollment in Massachusetts dropped 17 percent (see Public School Student Enrollment chart in the Appendix).¹ Although the impact of decreased total spending on education between 1980/81 and 1986/87 was lessened by the declining numbers of students to educate, figures from the Massachusetts Department of Education project that enrollments have started to increase in the younger grades. Projections suggest that enrollments will increase 12

¹The decline in public school enrollment in Massachusetts was part of a nation-wide trend, although the decline was slightly higher in Massachusetts than in comparison states. The enrollment decline has been due primarily to shifts in the general age of the population, not to shifts in attendance from public to private education. According to figures from the U.S. Bureau of the Census, the proportion of school-aged persons in public versus private schools has stayed relatively constant at 88 percent of students during the years studied, both in Massachusetts and in the country as a whole.

percent in kindergarten through sixth grade between 1987/88 and 1992/93, and total enrollments will increase by 3 percent. With increasing numbers of students to educate, the public education system will feel even more the impact of a decline in public funds.

CHANGES IN EXPENDITURES PER PUPIL

A standard method for examining the rate of expenditure on a public service is to measure the unit cost of that service over a specified period of time. Accordingly, the Committee analyzed changes in educational expenditures per pupil, the typical unit cost used to evaluate expenditures on education. This measure can be a useful analytical tool when it is tracked over a period of time and when it is adjusted to account for inflation.

It is important to recognize, however, the technical limitations of the per pupil expenditure measure. It is difficult, for example, to compare educational expenditures per pupil in a given year from one state to another since this particular measure does not take into account state differences in the real cost of providing education. For example, in a state with high housing costs, teacher salaries, a component of the per pupil expenditure measure, will most likely be higher than in a state where housing is relatively inexpensive. Similarly, the per pupil expenditure measure will not account or adjust for other factors, such as the number of special needs students in the public school system, that might produce variations in the cost of education.

For this reason, the Committee used this measure as one indicator of state spending on education in combination with other indicators, and only as a way of comparing trends over time from one state to another. The Committee based

the per pupil expenditure measure on estimated average daily student attendance, and did not include educational capital outlays in the computation.²

Table I (below) examines the changes in educational expenditure per pupil in Massachusetts and in the comparison states between the years 1980/81 and 1989/90. All of the numbers have been adjusted to 1988 dollars.³

Table I
PER PUPIL EXPENDITURES ON EDUCATION
Massachusetts and Comparison States (1980/81-1989/90)

<u>State</u>	<u>1980/81</u>	<u>1989/90</u>	<u>Change</u>
MA	\$4,394	\$5,240	19 %
CA	3,465	N/A	N/A
CT	4,046	6,484	60 %
IN	2,801	3,475	24 %
MD	3,925	4,856	24 %
MN	3,785	4,123	9 %
NJ	4,585	6,819	49 %
NY	4,781	6,609	38 %
PA	3,667	5,063	38 %
WI	3,704	4,609	24 %
US Avg.	\$3,372	\$4,061	20 %

Sources: Book of the States, C.S.G. 1982/83
 Estimates for 1989/90 from N.E.A. Today, May/June 1989
 (Figures for California are not available.)
 [Adjusted to 1988 dollars using the GNP Deflator
 and DRI/McGraw-Hill U.S. Long-Term Review, Summer 1989]

²It is also possible to compute per pupil expenditures based on student enrollments rather than on attendance. In states with a high rate of student absenteeism, enrollment and attendance rates will be significantly different. In fact, according to figures from the N.E.A., in 1988/9 Massachusetts had the highest absenteeism rate in the country (10.3%). Basing the computation on enrollment figures rather than attendance, therefore, would lower Massachusetts' per pupil expenditure level relative to other states.

³All of the expenditure figures in this study have been adjusted to 1988 dollars using one of several indices: the Gross National Product Deflator Index for State and Local Governmental Purchases of Goods and Services ("GNP Deflator") or the national Consumer Price Index ("CPI"). Expenditures made after 1988 have been adjusted based on econometric projections.

When examining the percentage changes in spending based on per pupil expenditures through 1989/90, Massachusetts lagged behind the comparison states and the national average. Between 1980/81 and 1989/90, per pupil expenditures on public education in Massachusetts increased 19 percent -- a rate close to the national average.

In all but one of the comparison states during this time, however, rates of increase in per pupil expenditures rose significantly more than in the state of Massachusetts. The largest rates of increase were in our neighboring competitor states: a 60 percent increase in the state of Connecticut, a 49 percent increase in New Jersey, and a 38 percent increase in both New York and Pennsylvania.

CHANGES IN PER CAPITA SPENDING ON EDUCATION

In order to measure the state's relative commitment to spending on education, the Committee looked at how much money Massachusetts has been spending on education per capita. This indicator, which relates total expenditures on a particular public service to the total state population, is a useful way of looking at the change in the fiscal "burden" of a public service on the state population. This figure is meaningful as a comparative measure from state to state since the proportion of students in the population tends to be fairly consistent across the comparison states (see Public School Student Population chart in the Appendix).

Table II (below) compares and ranks per capita expenditures on education in Massachusetts and in the nine comparison states for 1980/81 and

1986/87 (the last year for which figures are currently available). All numbers have been adjusted to 1988 dollars.

Table II

**PER CAPITA SPENDING ON EDUCATION
Massachusetts and Comparison States (1980/81-1986/87)**

<u>State</u>	<u>1980/81</u>	<u>Rank</u>	<u>1986/87</u>	<u>Rank</u>	<u>Change</u>
MA	\$669.80	4	\$660.13	8	-1 %
CA	641.66	7	672.96	6	5 %
CT	621.98	8	713.08	5	15 %
IN	550.99	10	601.72	10	9 %
MD	642.55	6	660.13	8	3 %
MN	689.07	3	786.07	3	14 %
NJ	705.19	2	791.59	2	12 %
NY	736.31	1	901.37	1	22 %
PA	595.36	9	663.27	7	11 %
WI	662.35	5	727.05	4	10 %
US Avg.	\$611.97		\$674.50		10 %

Source: U.S. Bureau of Census GF-81-5/GF-87-5
[Adjusted to 1988 dollars using the GNP Deflator]

During the period analyzed, per capita spending on education actually dropped in Massachusetts. Nationwide, however, and in all of the comparison states, spending increased. Among the ten states analyzed, between 1980/81 and 1986/87 Massachusetts dropped in ranking on per capita spending on education from fourth to eighth.

Moreover, per capita spending on education in Massachusetts declined while total governmental expenditures in the state increased. In 1980/81, figures from the U.S. Bureau of the Census indicate that Massachusetts spent \$3,171.28 (1988 dollars) per capita on the costs of state government. By 1986/87, the state was spending \$3,772.13 (1988 dollars), an increase of 19 percent. As Table II indicates, during this same period per capita expenditures on education

actually dropped 1 percent. Educational expenditures went from 21 percent of state spending in 1980/81 to 18 percent by 1986/87. These figures suggest the state was decreasing its effort to support public education.

The analysis of per capita spending on education is useful for comparing the relative spending effort from state to state. Massachusetts, California and Maryland were the only states that spent more than the national average in 1980/81, and less than the national average in 1986/87. In 1980/81, the Commonwealth's per capita spending on education was 9 percent greater than the national average. By 1986/87, however, Massachusetts was spending 2 percent less than the per capita national average, and of the nine comparison states, only Indiana spent less per capita on education than Massachusetts.

Using estimates from the Massachusetts Departments of Education and Revenue for 1987/88, there was a significant increase in per capita spending on education in Massachusetts. In that one year, per capita spending on education increased 5 percent. This increase, although a marked improvement for one year, would probably not change the state's position relative to the other comparison states.

EDUCATIONAL EXPENDITURES PER \$1,000 OF PERSONAL INCOME

The third measure the Committee looked at was educational expenditures per every one thousand dollars of total personal income. This ratio is often used to assess a state's "willingness" to pay for a service and measures the relative "burden" on the taxpayer of paying for a particular service.

Table III (below) looks at expenditures on education for every one

thousand dollars of personal income in Massachusetts and in the nine comparison states. Because this number is essentially a proportion or a rate, these numbers do not need to be adjusted to account for inflation. We looked at the change in the rate between 1980/81 and 1986/87 (the last year for which figures are currently available), and we ranked the states based on their expenditures during the two time periods.

Table III
EDUCATIONAL EXPENDITURES PER \$1,000 OF PERSONAL INCOME
Massachusetts and Comparison States (1980/81-1986/87)

<u>State</u>	<u>1980/81</u>	<u>Rank</u>	<u>1986/87</u>	<u>Rank</u>	<u>Change</u>
MA	\$47.85	4	\$35.98	9	-25 %
CA	42.43	9	38.98	7	- 8 %
CT	38.39	10	34.98	10	- 9 %
IN	44.61	7	43.98	5	- 1 %
MD	44.45	8	37.98	8	-15 %
MN	51.25	3	50.45	2	- 2 %
NJ	46.66	5	40.87	6	-12 %
NY	51.90	1	50.46	1	- 3 %
PA	45.64	6	44.63	4	- 2 %
WI	51.26	2	50.15	3	- 2 %
US Avg.	\$46.48		\$44.20		- 5 %

Source: U.S. Bureau of Census GF-81-5/GF-87-5

During the period analyzed, Massachusetts' educational expenditures per one thousand dollars of personal income dropped dramatically -- from \$47.85 of every one thousand dollars to \$35.98. This 25 percent drop was far greater than the decline experienced by any of the other comparison states, and was a drop five times greater than the national average.⁴

⁴During this period the burden of educational expenditures shifted from local government to state government. According to figures from the Massachusetts Department of Education, in 1980/1 state government paid 39 percent of the educational bill (\$1.54 billion in 1988 dollars), whereas the local share was 61 percent. In 1988/9 the state share grew to 44 percent or \$2.03 billion, and the local share dropped to 56 percent. These local expenditures

In 1980/81, Massachusetts ranked fourth among the comparison states in educational expenditures per one thousand dollars of personal income, and its spending rate was just 3 percent above the national average. By 1986/87, however, Massachusetts had dropped to second-to-last among the comparison states -- 19 percent below the national average.

Personal income in Massachusetts grew during this period (see Per Capita Income chart in the Appendix), suggesting that the portion of personal income needed to pay for quality education declined. The four other states with comparable per capita income growth (Connecticut, Maryland, New Jersey and New York), however, did not exhibit the steep decline that Massachusetts did in this measure. Those four other states chose to continue to commit their increasing state resources to education.

CONCLUSIONS

The Senate Committee on Post Audit and Oversight looked at three measures of the state's financial commitment to education: changes in the state's spending over time; changes in the state's effort compared to other states; and changes in the state's willingness to pay. These measures indicate that the state did not dramatically increase its commitment to education, and compared to key competitor states, the state's commitment to funding education declined.

Only with the educational reform initiatives enacted during 1985 and 1987 did state support for education even grow at a rate equal to the national

included additional state revenues (such as local aid) that were available to local governments to support education.

average. The failure to increase substantially financial support for education in Massachusetts belies the Commonwealth's stated commitment to supporting consistently high-quality education across the state. The educational initiatives of recent years are at risk of turning into empty promises without the financial commitment to implement them.

APPENDIX

These charts compare Massachusetts with nine other states in public school enrollment, in student population, and in per capita income.

PUBLIC SCHOOL STUDENT ENROLLMENT **Massachusetts and Comparison States (1980/81-1986/87)**

<u>State</u>	<u>1980/81</u>	<u>1986/87</u>	<u>Change</u>
MA	1,018,777	845,000	-17 %
CA	4,055,248	N/A	N/A
CT	547,262	458,700	-16 %
IN	1,053,501	929,703	-11 %
MD	750,188	672,383	-10 %
MN	751,197	703,372	- 6 %
NJ	1,249,000	1,096,456	-12 %
NY	2,855,750	2,544,000	-10 %
PA	1,909,800	1,648,000	-13 %
WI	837,844	751,829	- 9 %

Source: Book of the States, C.S.G., 1982/83 and 1988/89
(Figures for California are not available.)

PUBLIC SCHOOL STUDENT POPULATION **Massachusetts and Comparison States (1986/87)**

<u>State</u>	<u>Total State Population</u>	<u>Student Population</u>	<u>Students as % of Total Pop.</u>
MA	5,855,000	845,000	14 %
CA	27,663,000	N/A	N/A
CT	3,211,000	458,700	14 %
IN	5,531,000	929,703	17 %
MD	4,535,000	672,383	15 %
MN	4,246,000	703,372	17 %
NJ	7,672,000	1,096,456	14 %
NY	17,825,000	2,544,000	14 %
PA	11,936,000	1,648,000	14 %
WI	4,807,000	751,829	16 %

Sources: Book of the States, C.S.G. 1986/87
U.S. Bureau of Census GF-85-5
(Figures for California are not available.)

PER CAPITA INCOME
Massachusetts and Comparison States (1980-1988)

<u>State</u>	<u>1980</u>	<u>1988</u>	<u>Change</u>
MA	13,177	20,816	58 %
CA	14,235	18,753	32 %
CT	15,253	23,059	51 %
IN	11,630	14,924	28 %
MD	13,613	19,487	43 %
MN	12,655	16,674	32 %
NJ	14,217	21,994	55 %
NY	13,353	19,305	45 %
PA	12,278	16,233	32 %
WI	12,166	15,524	28 %
US Avg.	12,391	16,489	33 %

Source: U.S. Bureau of Census GF-81-5/GF-87-5
[Adjusted to 1988 dollars using the CPI]
